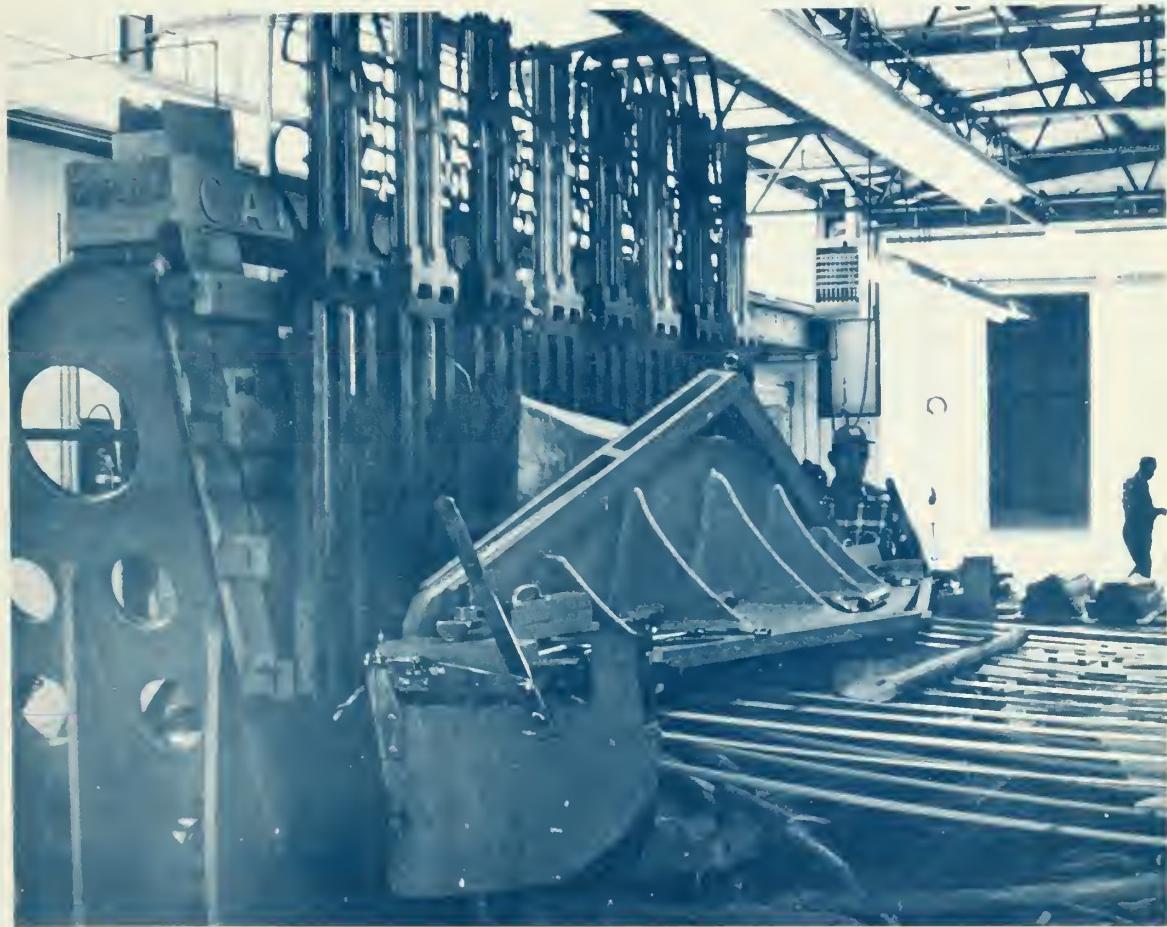


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THE VENEER INDUSTRY IN THE NORTHEAST-1972



by James T. Bones and David R. Dickson

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The success of a survey depends upon the percentage of responses received from the population sampled and the effort put forth by the respondents in providing information. We are grateful to the Northeast's veneer industry for their immediate and accurate responses. All veneer plants known to be operating in 1972 in the Northeast provided data for this survey.

THE VENEER INDUSTRY IN THE NORTHEAST-1972

ABSTRACT

From a survey of veneer producers in the Northeast in 1972, veneer-log production and receipts by states and species, and log shipments between states and regions are presented. Comparisons are made with a similar survey made in 1968. A current list of northeastern veneer manufacturers is included.

HIGHLIGHTS

THE 1972 veneer industry survey in the Northeast showed that since the 1968 survey:



Veneer log production dropped 29 percent to 125 million board feet.



Veneer log receipts at northeastern veneer plants dropped 20 percent to 123 million board feet.



There were 21 fewer veneer plants operating in the Northeast. No new plants started to operate.



Exports of veneer logs from the Northeast nearly equal imports.

BACKGROUND

Periodically in the Northeast, regional production surveys are initiated for a single product so that the importance of that product can be determined in relation to the forest-products industry as a whole. Veneer manufacturing ranks third in importance in the Northeast, as measured by annual receipts of roundwood, behind sawlogs and pulpwood. The most recent survey of production for the industry was conducted in 1968. Since then statewide industry surveys conducted in conjunction with the reappraisals of the entire timber resource indicate that the veneer industry in the Northeast has been in a period of constant change.

Early in 1973, the Northeastern Forest Experiment Station contacted all operating ve-

neer plants in the Station's 14-state territory (Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and West Virginia) for 1972 plant receipts (see list of plants, page 13). The survey was coordinated with similar surveys of states in the North Central and Southern regions.

Wood receipts information was exchanged with neighboring experiment stations to assure complete coverage by the cooperating stations. In addition, log shipments to and from Canada were determined. Veneer logs that were harvested and exported through log brokers or concentrators overseas were not included in the survey.

PROFILE OF THE INDUSTRY

The veneer manufacturers in the Northeast can be separated into broad classes according to the industries they serve and the products they make. The following three classes of plants were identified in our survey: (1) commercial and face veneer manufacturers that produce veneer for the plywood and furniture industries; (2) container veneer manufacturers that fabricate veneer boxes, baskets, and similar containers, mostly for the vegetable and fruit-growing and packing industries; and (3) specialty veneer manufacturers that produce hundreds of items ranging from tooth picks to ice cream spoons and tongue depressors.

Forty-eight veneer plants were operating in the Northeast in 1972. These plants were scattered throughout the northeastern states. Some plants were located near veneer-log sources or

product markets; others were located near major transportation networks and favorable labor markets. Because log requirements are more exacting for face and commercial veneer, these plant owners are willing to pay higher prices for raw materials and to transport logs from greater distances to their plants. Most container veneer plants, however, are located in agricultural sections of the Northeast, and procure their veneer logs and sell their product locally. Eight of the 11 specialty-veneer plants in 1972 were located in Maine and used mostly white birch bolts as a raw material. These plants provide a stable base for the State's wood using industries, since their wood requirements and product outputs fluctuate very little from year to year.

Characteristics of the three classes of veneer plants in the Northeast in 1972 were:

Characteristic	Class of veneer plant		
	Commercial and face	Container	Specialty
Volume of log receipts	2.2 million board feet per plant	0.5 million board feet per plant	3.0 million board feet per plant
Major species received	Red oaks, black cherry, and walnut	Yellow-poplar, soft maple, and sweetgum	White birch and hard maple
Size of log procurement area	From 2- to 8-state area	From consuming or neighboring state	From within consuming state
Plant location	Evenly scattered throughout Northeast	Atlantic coastal plain or bordering Great Lakes	Mostly in Maine
Product market areas	Eastern population centers and Southeastern furniture industry	Local agricultural areas	Nationwide

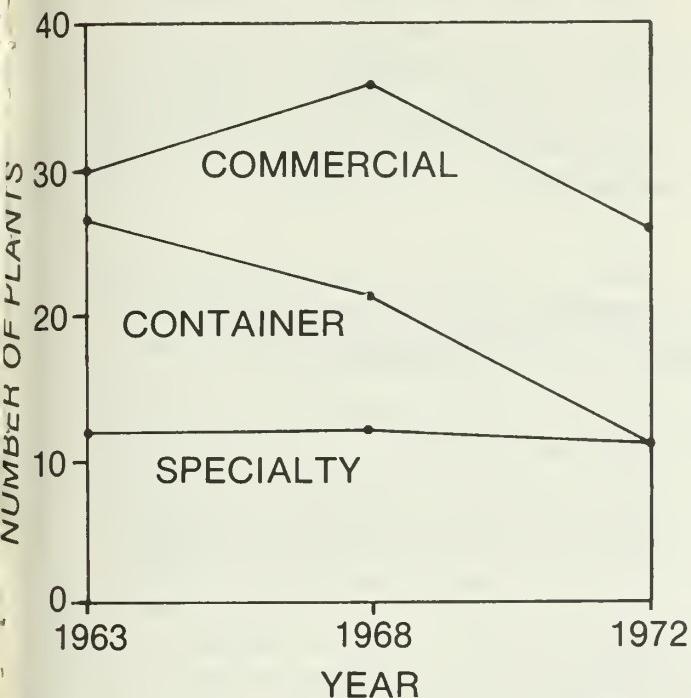
Though the total number of active veneer plants in the Northeast was the same in 1968 as in 1963, six container veneer plants closed and six commercial veneer plants opened during that period (fig. 1). Twenty-two plants closed between 1968 and 1972 and one was added, dropping the total number of active plants from 69 to 48.

Container veneer industry.—In all, 16 container veneer plants have closed since 1963, a

decline of 59 percent. Six of the plants closed between 1963 and 1968 and 10 closed between 1968 and 1972. Many things were responsible for these container veneer plant closures. Of major importance was slackening in demand for wood containers. Small family farms are being replaced by large-scale agribusinesses whose volumes justify the use of automated harvesting and transporting equipment.

Another demand-related factor is that in-

Figure 1.—Number of veneer plants operating in the Northeast, by class of plant, for selected years.



creased labor and material costs have been passed along to the fruit and vegetable producers in the form of higher prices for wooden containers. Roadside produce retailers can no longer afford to absorb the cost of the basket when marketing their produce. The baskets are used for display only and the produce is transferred to a paper bag at the time of sale.

Container veneer plant closures can also be traced to a scarcity of skilled labor. The veneer production portion of a container plant can easily be automated, but the container assembly portion is quite labor intensive. Assembly workers are highly skilled and, when they retire, are difficult to replace (fig. 2).

The rising cost of wood was another factor that contributed to some plant closures. Veneer quality yellow-poplar and gum logs are in great demand as are most other hardwood species. Shortly before a major New Jersey wood container plant closed, management switched to plastic basket bottoms in a final cost-cutting effort. The price of the pine lumber used for apple and peach basket bottoms had become prohibitive.

Commercial Veneer Industry.—The number of active commercial veneer plants in the Northeast increased from 30 to 36 between 1963 and 1968, then dropped to 26 in 1972. This mixed performance can best be explained by relating plant closures to hardwood plywood consumption during the period. In the past 12 years hardwood plywood consumption in the United States has jumped from less than 2 billion square feet to over 8 billion square feet in 1972. During the early 1960's the ratio of hardwood plywood imports to total United States consumption was running slightly over 50 percent. But since 1967 this ratio has increased sharply and by 1972 imports reached nearly 75 percent. While the volume of imports jumped more than 400 percent between 1962 and 1972, domestic shipments rose only 63 percent. This increased penetration of the United States hardwood plywood market by foreign producers caused many commercial veneer manufacturers that were directly competing for the same markets to succumb. In the Northeast, demand for prestige paneling has decreased as the spread in price between domestic hardwood paneling and lauan continues to grow and the construc-

Figure 2.—Basket assembly workers are highly skilled and difficult to replace.



tion cost of medium-priced single-family houses continues to increase.

Specialty veneer industry.—Specialty veneer plants made up 17 percent of all veneer plants in both 1963 and 1968, and although the number of specialty veneer plants in 1972 dropped from 12 to 11, they now make up 23 percent of the total. One plant in Maine and another plant in Vermont closed between 1968 and

1972, while a New Hampshire plant was added to the specialty veneer group.

Eight of the 11 specialty veneer plants operating in 1972 are located in Maine; the other three are in New Hampshire, Vermont, and New York. Species in demand by the specialty veneer plants are limited to white birch and hard maple.

HARVEST DOWN 29 PERCENT--PLANT RECEIPTS DOWN 20 PERCENT

Veneer log production in the Northeast in 1972 was about 125 million board feet (International $\frac{1}{4}$ -inch log rule); a decrease of 29 percent from the 175 million board feet reported in 1968. Production losses from 1968 levels were reported by all of the 14 northeastern states. Individual losses ranged from 9 percent in Ohio to 74 percent in New Hampshire.

Sixty-eight percent—nearly 85 million board feet—of the Northeast's veneer log production in 1972 went to plants producing commercial and face veneer (fig. 3). The remaining 40 million board feet of production was divided between container veneer plants (16 million

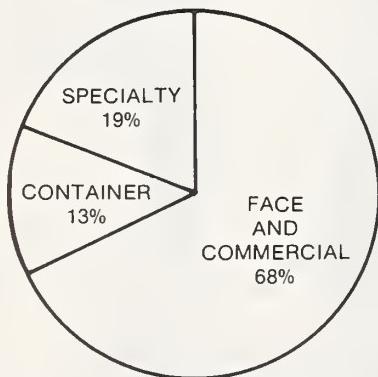
board feet) and specialty veneer plants (24 million board feet).

The 38 million board feet of veneer logs that were harvested in Maine in 1972 represent 30 percent of the Northeast's production total and 85 percent of the volume of wood received at specialty veneer manufacturing plants. Maryland was the second largest veneer log producer in 1972, accounting for 21 percent of the Northeast total. Most of its production was from southern pines.

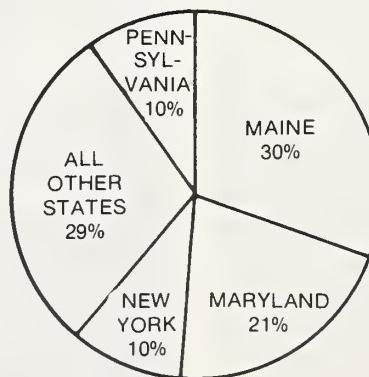
Birch continued as the most important species used for veneer in the Northeast in 1972, but its once dominant position is being challenged. Based on volume harvested, the fol-

Figure 3.—Veneer log production in percent, 1972.

BY PRODUCT



BY STATE



BY SPECIES



lowing ranking of hardwood species shows the changes that have occurred during the last nine years:

1963	1968	1972
Birch	Birch	Birch
Yellow-poplar	Yellow-poplar	Red oak
Hard maple	Red oak	Yellow-poplar
Red oak	Hard maple	Hard maple

The proportion of veneer made from red oak has increased during the period, the proportion made from hard maple and yellow-poplar has decreased. Current demand for high-quality hard maple for export to Japan has caused domestic shortages. Demand for yellow-poplar, the major species used for container veneer, has waned with the numerous container plant closures.

Use has spread over a larger range of species since 1963. In that year the four most pre-

ferred species accounted for 72 percent of the 153 million board feet that were produced, while in 1972 the four species only accounted for 58 percent of the production total.

Beech was the only northeastern hardwood species whose 1972 production total exceeded the 1968 total. Southern pine veneer log production rose to 25 million board feet in 1972, an 80 percent increase over 1968.

Log receipts at veneer plants in the Northeast were over 123 million board feet (International $\frac{1}{4}$ -inch log rule) in 1972. This represents a decrease of 20 percent from the 154 million board feet reported in 1968. Only four states—Kentucky, Maryland, Ohio, and Pennsylvania—reported gains in log receipts between 1968 and 1972. Two states reported the closure of their only veneer plant during the period, bringing the number of states in the Northeast with no operating veneer plants to four.

INTERREGIONAL AND INTERSTATE SHIPMENTS

In both 1963 and 1968, the volume of veneer logs shipped out of the Northeast exceeded that of logs shipped into the region. This surplus of exports dropped from 26 million board feet (a 17 percent surplus) in 1963 to 21 million board feet (a 12 percent surplus) in 1968. In 1972, equilibrium was nearly reached; outshipments exceeded inshipments by only 1.7 million board feet (a 1 percent surplus).

Though commercial and face veneer producers are willing to transport logs great distances, specialty and container veneer producers purchase most of their veneer logs close to their plants. In states like Maine, where most of the Northeast's specialty veneer plants are located, a larger percentage of the industry's log requirement comes from within the State.

In other states, where commercial or face

veneer is manufactured, veneer log imports and exports are both quite high, with only token quantities of the veneer log harvest going to local veneer plants for manufacture. This situation exists because the veneer log resources of a given state—species and supply—are not always compatible with the needs of local industry. For example, West Virginia veneer plants purchase hard maple and yellow birch from Vermont, white ash and black cherry from Pennsylvania, and yellow-poplar and gum from Maryland.

New York and Pennsylvania both exported greater volumes of veneer logs than they imported from neighboring states for manufacture. More than 19 million board feet of veneer logs—representing 16 percent of the 1972 production—were shipped outside the Northeast for manufacture.

HIGH RECOVERY OF PLANT RESIDUES

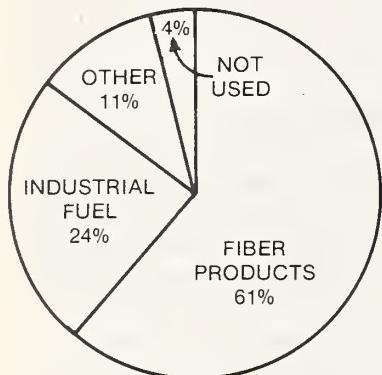
Northeastern veneer plants generated over 11 million cubic feet of manufacturing residues in 1972. This total was made up of 5 million cubic feet of coarse woody material that was large enough to convert into wood chips, 4 million cubic feet of fine woody material that was too small to be chipped, and 2 million cubic feet of bark.

Most of the bark and fine residue was used for boiler fuel at the veneer plants (fig. 4). Over 60 percent of the coarse wood residue

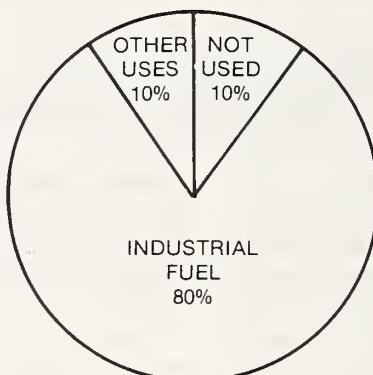
was converted into chips for pulp or other fiber products. The remaining coarse wood residue was used for industrial fuel (24 percent), domestic fuel (2 percent), and remanufactured into other items such as fence posts, small dimension, and specialty items (9 percent). Four percent of the coarse wood residue, 10 percent of the fine wood residue, and 21 percent of the bark was not used. Most of this material was dumped, buried, or burned.

Figure 4.—Disposition of veneer plant residues in percent, 1972.

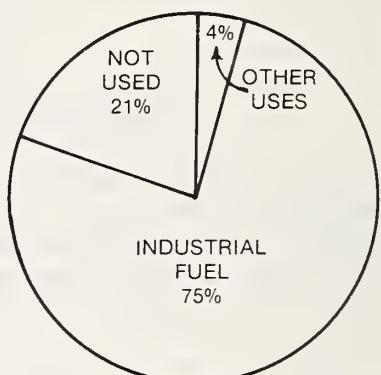
COARSE RESIDUE



FINE RESIDUE



BARK RESIDUE



INDUSTRY OUTLOOK

During the next 5 years certain segments of the veneer industry in the Northeast should do well, while others will continue to experience difficulties.

No improvement is expected for the container-veneer producers because long term demand for wood containers is expected to diminish. Those container veneer plants that continue to operate in the Northeast may experience short run rises in demand as other plants close, but rising labor and material costs will be a continuing deterrent to their profitability.

The specialty veneer segment of the industry depends on the superiority of its products over substitute items. Most of the specialty veneer manufacturers have been successful in holding their markets when challenged by competing products and materials and there is no reason to believe that they will not continue to do so. These plants are located close to an adequate wood supply and have a wide range of marketing alternatives since they distribute their products nationwide.

The face and commercial veneer segment of the industry seems to have the greatest poten-

tial for expansion, but it is confronted by the gravest problems. The disparity between the price of domestic veneer and that of imported veneer is narrowing for the first time in several years because of increased world demand for Asian mahogany logs. Europe has been cut off from its source of hardwood logs in Africa and has shifted its buying to Indonesia. Japan, which is experiencing a construction boom, continues to import greater quantities of hardwood logs from the Philippines. Increased competition for these Asian logs surely points to rising log and veneer prices to U. S. importers in the future.

On the negative side, northeastern hardwood plywood manufacturers agree that the quality of domestic logs is going down each year while log prices are rising. Hauling veneer-quality logs greater distances has also contributed to increased costs.

To meet the increased market demand for

white-faced and high quality veneer, many manufacturers are using a paper face that can be printed and finished to suit the trade, thus simulating clear veneers. If this trend continues much of the market for quality paneling from domestic species such as walnut, pecan, oak, and cherry will be satisfied by this advance in technology. In 1972 over 5 billion square feet of hardwood plywood was prefinished in the United States and sold as interior paneling. Approximately 28 percent was from a natural finish on lauan, 50 percent was lauan or similar species that had been printed and embossed or vinyl laminated to look like a more expensive species, and 22 percent had a natural finish on domestic species or more expensive foreign species.¹

¹ From data compiled by Clark E. McDonald, Managing Director, Hardwood Plywood Manufacturers Association.

TABULAR DATA

1. Veneer log production and receipt relationships in the Northeast, 1968 and 1972.
2. Species composition of veneer log harvest in the Northeast, 1968 and 1972.
3. Production of veneer logs in the Northeast, by states and receiving plant classes, 1972.
4. Receipts of veneer logs in the Northeast, by states and plant classes, 1972.
5. Flow of veneer logs between states in the Northeast, 1972.
6. Extra-regional recipients of veneer logs from the Northeast, 1972.
7. Disposition of veneer plant residues in the Northeast by states, classes of residues, and types of use, 1972.

Table 1.—Veneer log production and receipt relationships in the Northeast,
1968 and 1972

State	Production			Receipts		
	1968	1972	Change	1968	1972	Change
	<i>Million board feet^a</i>		<i>Percent</i>	<i>Million board feet^a</i>		<i>Percent</i>
Connecticut	0.2	0.1	-67	—	—	—
Delaware	9.5	7.0	-26	(D)	(D)	(D)
Kentucky	8.4	5.6	-34	6.2	8.5	+38
Maine	49.7	38.0	-23	44.7	41.0	-8
Maryland	32.4	26.7	-18	29.2	30.1	+3
Massachusetts	1.9	.9	-51	—	—	—
New Hampshire	8.0	2.1	-74	(D)	(D)	(D)
New Jersey	1.5	.7	-55	9.2	.9	-90
New York	17.4	13.1	-25	18.1	11.7	-36
Ohio	7.9	7.2	-9	4.8	7.0	+45
Pennsylvania	16.5	12.3	-25	4.8	7.4	+56
Rhode Island	—	—	—	—	—	—
Vermont	14.1	7.0	-51	19.1	10.4	-46
West Virginia	7.9	4.3	-45	8.7	6.1	-29
All states	175.4	125.0	-29	154.4	123.3	-20

^a International 1/4-inch rule.

(D) Data withheld to avoid disclosure for individual plants.

Table 2.—Species composition of veneer log harvest in the Northeast,
1968 and 1972

Species	1968		1972		Change
	<i>Million board feet^a</i>	<i>Percent</i>	<i>Million board feet^a</i>	<i>Percent</i>	
Ash	1.0	0.6	0.6	0.5	-46
Basswood	2.6	1.5	.7	.5	-75
Beech	5.8	3.3	9.0	7.2	+55
Birch	57.3	32.6	36.9	29.5	-36
Cherry	5.2	3.0	2.7	2.2	-47
Cottonwood	1.5	.8	1.2	1.0	-19
Elm	3.6	2.1	.7	.6	-80
Hickory	3.2	1.8	2.8	2.2	-14
Maple, hard	12.8	7.3	9.1	7.3	-29
Maple, soft	2.2	1.3	1.4	1.1	-39
Oak, red	16.5	9.4	15.6	12.5	-5
Oak, white	4.3	2.4	3.4	2.7	-20
Sweetgum	5.0	2.9	.1	.1	-98
Sycamore	1.2	.7	.5	.4	-59
Tupelo, black	.7	.4	.1	.1	-84
Walnut	6.0	3.4	4.5	3.6	-24
Yellow-poplar	31.3	17.9	10.3	8.2	-67
Other hardwoods	1.1	.6	(*)	(*)	-97
Total hardwoods	161.3	92.0	99.6	79.7	-38
Total softwoods	14.1	8.0	25.4	20.3	+80
All species	175.4	100.0	125.0	100.0	-29

^a International 1/4-inch log rule.

* Less than 50,000 board feet or 0.5 percent.

Table 3.—Production of veneer logs in the Northeast, by states and receiving plant classes, 1972

(Million board feet
International 1/4-inch log rule)

State	Class of receiving veneer plant		
	Commercial and face	Container	Specialty
Connecticut	0.1	—	—
Delaware	7.0	—	—
Kentucky	5.0	0.6	—
Maine	17.3	—	20.7
Maryland	21.2	5.2	.3
Massachusetts	.4	—	.5
New Hampshire	1.6	.3	.2
New Jersey	.3	.4	—
New York	10.9	1.3	.9
Ohio	4.3	2.9	—
Pennsylvania	11.1	.9	.3
Rhode Island	—	—	—
Vermont	2.1	3.6	1.3
West Virginia	3.5	.6	.2
All states	84.8	15.8	24.4

Table 4.—Receipts of veneer logs in the Northeast, by states and plant classes, 1972

(Million board feet
International 1/4-inch log rule)

State ^a	Class of veneer plant		
	Commercial and face	Container	Specialty
Kentucky	8.5	—	—
Maine	15.3	—	25.7
Maryland	30.1	—	—
New Hampshire	—	—	(D)
New Jersey	—	0.9	—
New York	9.3	—	2.4
Ohio	4.2	2.8	—
Pennsylvania	7.2	(D)	—
Vermont	5.1	(D)	(D)
West Virginia	6.1	—	—
All states	85.8	9.1	28.4

^a States with no operating veneer plants are omitted.

(D) Data withheld to avoid disclosure for individual plants.

Table 5.—Flow of veneer logs between states in the Northeast, 1972

(Million board feet, International $\frac{1}{4}$ -inch log rule)

State	Production	Interstate shipments ^a		Apparent consumption
		Exports	Receipts	
Connecticut	0.1	0.1	—	—
Delaware	7.0	7.0	(D)	(D)
Kentucky	5.6	3.0	5.9	8.5
Maine	38.0	4.2	7.2	41.0
Maryland	26.7	7.8	11.2	30.1
Massachusetts	.9	.9	—	—
New Hampshire	2.1	1.9	(D)	(D)
New Jersey	.7	.3	.5	.9
New York	13.1	3.7	2.3	11.7
Ohio	7.2	3.5	3.3	7.0
Pennsylvania	12.3	6.7	1.7	7.4
Rhode Island	—	—	—	—
Vermont	7.0	1.8	5.4	10.4
West Virginia	4.3	2.6	4.4	6.1
All states	125.0	—	—	123.3

^a Includes shipments to and from Canada.

(D) Data withheld to avoid disclosure for individual plants.

Table 6.—Extra-regional recipients of veneer logs from the Northeast, 1972

(Million board feet,
International $\frac{1}{4}$ -inch log rule)

State or Province	Volume received
Illinois	(*)
Indiana	4.6
Iowa	(*)
Missouri	.4
North Carolina	6.3
Ontario, Canada	.4
Quebec, Canada	3.7
Tennessee	.4
Virginia	3.6
All states and provinces	19.4

* Less than 50,000 board feet.

Table 7.—Disposition of veneer plant residues in the Northeast by states, classes of residues, and types of use, 1972
(In percent)

Class of residue and type of use	Kentucky	Maine	Maryland	New Jersey	States				All States
					New York	Ohio	Pennsyl- vania	Vermont	
Coarse:^a									
Fiber products	86	52	97	—	61	41	35	49	61
Industrial fuel	5	31	—	67	33	29	25	23	24
Domestic fuel	—	(*)	3	—	—	6	8	(*)	2
Other ^b	—	8	—	—	—	19	40	20	9
All uses	91	91	100	67	100	97	100	100	97
Not used	9	9	—	33	—	3	—	—	4
Fine:^c									
Fiber products	—	6	—	—	—	10	—	—	3
Industrial fuel	49	76	97	67	100	43	100	51	97
Domestic fuel	—	—	—	—	—	—	—	—	—
Agricultural ^d	—	—	3	—	—	42	—	49	7
All uses	49	82	100	67	100	95	100	100	97
Not used	51	18	—	33	—	5	—	(*)	10
Bark:									
Industrial fuel	49	78	89	67	91	95	100	49	87
Agricultural	—	4	3	—	—	—	—	7	4
All uses	49	82	92	67	91	95	100	56	87
Not used	51	18	8	33	9	5	—	44	13
									21

^a Core and trimmings considered suitable for chipping.

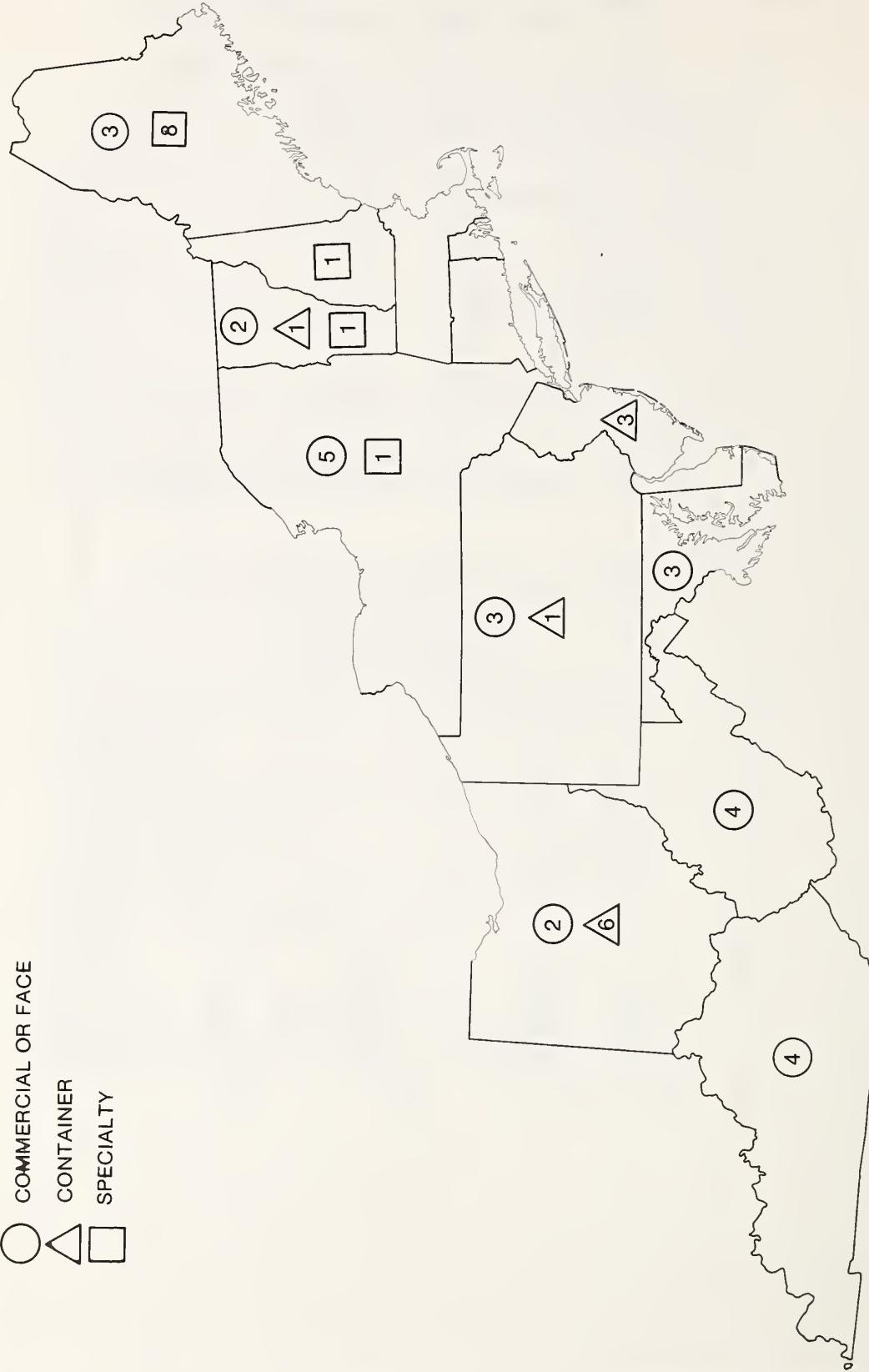
^b Includes small dimension and specialty items.

^c Clipping and rounding waste considered unsuitable for chipping.

^d Includes chicken litter, livestock bedding, and mulch.

* Less than 0.5 percent.

Figure 5.—Distribution of active veneer plants in the Northeast by state and type of plant, 1972. The numbers inside the symbols indicate the number of plants operating within the state.



VENEER PLANTS IN THE NORTHEAST

- Kentucky*
1. Central States Veneer Co., Paducah
 2. Cumberland Forest Products Co., London
 3. The Tomlinson Co., Winchester
 4. Wood Mosaic Corp., Louisville
- Maine*
5. Diamond International Corp., Oakland
 6. Forster Manufacturing Co. (Plants in Mattawamkeag, E. Wilton, and Strong)
 7. Hardwood Products Company, Guilford
 8. J. M. Huber Co., Patten
 9. Indianhead Plywood Corp., Presque Isle
 10. PCI-National, Brownville
 11. Columbia Corp., Bingham
 12. Solon Manufacturing Co., Solon
 13. Strong Wood Turning Corp., Strong
- Maryland*
14. Chesapeake Bay Plywood Corp., Pocomoke City
 15. Stenersen Mahogany Corp., Cockeysville
 16. Veneers Inc., Cockeysville
- New Hampshire*
17. USM Corp., Plymouth
- New Jersey*
18. Finger Basket Co., Franklinville
 19. J. Hoffman and Son, Califon
 20. Rapp Package Co., Phillipsburg
- New York*
21. Tupper Lake Veneer Corp., Tupper Lake
- Ohio*
22. W. J. Cowee, Berlin
 23. Knight Veneer and Panel Corp., Falconer
 24. Riverside Veneer Corp., Heuvelton
 25. Robbins Veneer Co., Falconer
 26. Williamson Veneer Co., Fleischmans
- Pennsylvania*
27. Asplin Basket Co., Hartville
 28. Berlin Fruit Box Co., Berlin Heights
 29. Decort Basket Co., Salem
 30. Edon Manufacturing Co., Edon
 31. Hartzell Industries, Inc., Piqua
 32. Kingsville Basket Co., Kingsville
 33. McIntire Basket Co., Creston
 34. Ottawa Basket Co., Elmore
- Pennsylvania*
35. Greenfield Basket Co., Northeast
 36. Weyerhaeuser Co., Ridgeway
 37. Williamson Veneer Co. (Plants in Jefferson and New Freedom)
- Vermont*
38. Bradford Veneer and Panel Co., Bradford
 39. Indianhead Plywood Corp., Newport
 40. Lewis Bros. Inc., West Rupert
 41. Rutland Plywood Corp., Rutland
- West Virginia*
42. Allegheny Lumber Co., Elkins
 43. Breece Veneer Co., Kenova
 44. The Dean Co., Princeton
 45. Erath Veneer Corp., Martinsburg



THE FOREST SERVICE of the U. S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.